UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,045	03/07/2007	Jan Camenisch	CH920030068US1	5954
54856 LOUIS PAUL 1	90 07/15/2009 ERZBERG		EXAMINER	
3 CLOVERDA			NIGH, JAMES D	
MONSEY, NY 10952			ART UNIT	PAPER NUMBER
			3685	
			MAIL DATE	DELIVERY MODE
			07/15/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)	
	10/575,045	CAMENISCH, JAN	
Office Action Summary	Examiner	Art Unit	
	JAMES D. NIGH	3685	
The MAILING DATE of this communication  Period for Reply	on appears on the cover sheet w	ith the correspondence address	
A SHORTENED STATUTORY PERIOD FOR F WHICHEVER IS LONGER, FROM THE MAILII  - Extensions of time may be available under the provisions of 37 of after SIX (6) MONTHS from the mailing date of this communicat  - If NO period for reply is specified above, the maximum statutory  - Failure to reply within the set or extended period for reply will, by Any reply received by the Office later than three months after the earned patent term adjustment. See 37 CFR 1.704(b).	NG DATE OF THIS COMMUN CFR 1.136(a). In no event, however, may a ion. period will apply and will expire SIX (6) MO statute, cause the application to become A	CATION. reply be timely filed  NTHS from the mailing date of this communication. BANDONED (35 U.S.C. § 133).	
Status			
Responsive to communication(s) filed on     Za)    This action is <b>FINAL</b> .	This action is non-final. llowance except for formal mat	•	
Disposition of Claims			
4)  Claim(s) 1,2,4,5 and 21-24 is/are pending 4a) Of the above claim(s) is/are wis 5)  Claim(s) is/are allowed. 6)  Claim(s) 1-2, 4-5 and 21-24 is/are reject 7)  Claim(s) is/are objected to. 8)  Claim(s) are subject to restriction is	thdrawn from consideration.		
Application Papers			
9) The specification is objected to by the Example 10) The drawing(s) filed on is/are: a) Applicant may not request that any objection Replacement drawing sheet(s) including the control of the oath or declaration is objected to by the specific sheet is a specific sheet of the specific sheet in the specific sheet is a specific sheet of the specific sheet in the speci	☐ accepted or b)☐ objected to to the drawing(s) be held in abeya correction is required if the drawing	nce. See 37 CFR 1.85(a). g(s) is objected to. See 37 CFR 1.121(d).	
Priority under 35 U.S.C. § 119			
12) Acknowledgment is made of a claim for for a) All b) Some * c) None of:  1. Certified copies of the priority docu 2. Certified copies of the priority docu 3. Copies of the certified copies of the application from the International E * See the attached detailed Office action for	uments have been received.  uments have been received in a e priority documents have been Bureau (PCT Rule 17.2(a)).	Application No  n received in this National Stage	
Attachment(s)  1) Notice of References Cited (PTO-892)  2) Notice of Draftsperson's Patent Drawing Review (PTO-9-3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date	48) Paper No	Summary (PTO-413) (s)/Mail Date Informal Patent Application 	

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#### **DETAILED ACTION**

1. This communication is in response to amendments and remarks filed on 16 April 2009. Claims 1-2 and 4-5 have been amended, claims 3, 10-11 and 18-20 have been cancelled and claims 21-24 have been added. Claims 1-2, 4-5 and 21-24 are pending and are presented for examination on the merits.

## Response to Amendment

- 2. Claim 1 recites an improved method of maintaining privacy for transactions employing a user device having a security module. As claimed no structure is positively identified as executing the method steps. In the broadest reasonable interpretation the language "at a verification computer" and "at the verification computer" could be deemed as extra-solution activity; therefore the claim is not encompassing statutory subject matter under 35 U.S.C. § 101. This may be corrected by amending the language to recite "by a verification computer" and "by the verification computer".
- 3. Claim 1 recites "wherein the privacy certification authority computer uses a same base value for a sufficiently long period of time such that the privacy certification authority computer can determine a frequency with which the security module has requested certification, thereby allowing the privacy certification authority computer to identify whether the security module is a rogue security module". As claimed this is simply non-functional descriptive material as the recitation does not affect the method steps in a manipulative manner. In addition the word "sufficiently" renders the claim indefinite as "sufficiently" is a term of degree and the degree cannot be established. Examiner believes that by amending the language to more positively recite the method

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and eliminating the word "sufficiently" that the claim may be brought into better form.

Examiner believes that the language of paragraph 0042 would provide the foundation for writing additional steps.

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- 4. Claim 4 recites "The improved method according to claim 2, wherein the base value is different each time the method is applied". As claimed this is simply descriptive material and as the claimed data has no manipulative effect on any of the method steps it is nonfunctional in nature and therefore is not entitled to any patentable weight "Where the printed matter is not functionally related to the substrate, the printed matter will not distinguish the invention from the prior art in terms of patentability .... [T]he critical question is whether there exists any new and unobvious functional relationship between the printed matter and the substrate" *In re Gulack*, 217 USPQ 401 (Fed. Cir. 1983), *In re Ngai*, 70 USPQ2d (Fed. Cir. 2004), *In re Lowry*, 32 USPQ2d 1031 (Fed. Cir. 1994); MPEP 2106.01 II, for more recent treatment of non-functional descriptive material and the impact on patentability see *Ex parte Halligan*, 89 USPQ2d 1355 (Bd. Pat. App. & Int. 2008). However by including language from paragraphs 0042 and 0044 additional steps could be included which would bring the claims into better form.
- 5. Claim 5 recites "wherein the common value is obtained from an endorsement key that is related to the security module". Again this is non-functional descriptive material "Where the printed matter is not functionally related to the substrate, the printed matter will not distinguish the invention from the prior art in terms of patentability .... [T]he critical question is whether there exists any new and unobvious functional relationship between the printed matter and the substrate" *In re Gulack*, 217 USPQ 401 (Fed. Cir.

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1983), *In re Ngai*, 70 USPQ2d (Fed. Cir. 2004), *In re Lowry*, 32 USPQ2d 1031 (Fed. Cir. 1994); MPEP 2106.01 II, for more recent treatment of non-functional descriptive material and the impact on patentability see *Ex parte Halligan*, 89 USPQ2d 1355 (Bd. Pat. App. & Int. 2008). This language is also indefinite under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph as the "relationship" is not clear "An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed…", *In re Zletz*,13 USPQ2d 1320 (Fed. Cir. 1989). This could be overcome by including method steps using language from paragraph 0042.

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- 6. Claims 21-23 as claimed again are simply non-functional descriptive material as none of the claimed steps are affected by the recitations of data as described; however by making changes to the above claims such as those suggested by the Examiner the nature of the described material can be brought into the claims (perhaps with some adjustments) making the wherein language unnecessary which would then not bring MPEP § 2106 II C subsection c into play regarding "wherein" language.
- 7. Claim 24 is indefinite under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph as a computer readable medium cannot contain all the limitations of claim 1 as computer readable media cannot execute method steps. This may be overcome by amending the language as follows:

A computer program product tangibly embodying computer readable instructions which when executed cause the computer to perform the following steps:

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{Recite all the steps of claim 1}

## Response to Arguments

8. Applicant's argument with regard to the previous rejections under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph have been fully considered and are persuasive; however amended language contains indefinite language and thus a 35 U.S.C. § 112, 2<sup>nd</sup> paragraph rejection will be maintained albeit for different reasons.

- 9. Applicant's argument with regard to the previous rejections under 35 U.S.C. § 102(f) has been fully considered and is persuasive; this rejection will be withdrawn.
- 10. Applicant's argument with regard to the 35 U.S.C. § 103(a) rejection has been fully considered but is not completely persuasive. As the arguments regarding the common value and the base value are directed towards material that is simply descriptive in nature and has not been claimed in such a manner as to materially affect the method steps this material is non-functional in nature and as such does not receive patentable weight.

## Specification

11. The disclosure is objected to because of the following informalities: Paragraph 0042 recites "TMP" where it should probably be "TPM".

Appropriate correction is required.

# Claim Rejections - 35 USC § 101

12. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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13. Claims 1-2, 4-5 and 21-24 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1 recites an improved method of maintaining privacy for transactions employing a user device having a security module but does not positively recite any structure as performing the method, nor is any physical transformation occurring.

Based on Supreme Court precedent (See also *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876)) and recent Federal Circuit decisions, a §101 process must (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing. In addition, the tie to a particular apparatus, for example, cannot be mere extra-solution activity. See *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

An example of a method claim that would not qualify as a statutory process would be a claim that recited purely mental steps.

To meet prong (1), the method step should positively recite the other statutory class (the thing or product) to which it is tied. This may be accomplished by having the claim positively recite the machine that accomplishes the method steps. Alternatively or to meet prong (2), the method step should positively recite identifying the material that is being changed to a different state or positively recite the subject matter that is being transformed.

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In this particular case, claim 1 fails prong (1) because the "tie" (e.g. at a verification computer) is representative of extra-solution activity. Additionally, the claim(s) fail prong (2) because the method steps do not transform the underlying subject matter to a different state or thing.

The rejection may be overcome by positively reciting the structure performing the method. The modification of the language "at a verification computer" to "by a verification computer" would be sufficient for this purpose.

14. Claims 2, 4-5 and 21-24 are also rejected as being dependent upon claim 1.

# Claim Rejections - 35 USC § 112

- 15. The following is a quotation of the second paragraph of 35 U.S.C. 112:

  The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
- 16. Claims 1-2, 4-5 and 21-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
- 17. Claim 1 recites "wherein the privacy certification authority computer uses a same base value for a sufficiently long period of time such that the privacy certification authority computer can determine a frequency with which the security module has requested certification, thereby allowing the privacy certification authority computer to identify whether the security module is a rogue security module". The word "sufficiently" renders the claim indefinite as "sufficiently" is a term of degree and the degree cannot be established. "An essential purpose of patent examination is to fashion claims that

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are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed...", *In re Zletz*,13 USPQ2d 1320 (Fed. Cir. 1989).

- 18. Claim 5 recites "wherein the common value is obtained from an endorsement key that is related to the security module". The term "related to" is a relative term which renders the claim indefinite. The term "related to" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.
- 19. Claim 24 is indefinite under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph as a computer readable medium cannot contain all the limitations of claim 1 as computer readable media cannot execute method steps. In order to be a proper dependent claim the claim must contain all the limitations of the claim depends "An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed...", *In re Zletz*,13 USPQ2d 1320 (Fed. Cir. 1989)

# Claim Rejections - 35 USC § 103

- 20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 21. Claims 1-2, 4-5 and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over TPM Main Part 1 Design Principles (TPM Main Part 1 Design

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Principles, Specification Version 1.2, Revision 62, 2 October 2003, 161 pages,
Trusted Computing Group, hereinafter referred to as TPM) in view of TPM v1.2
Specification Changes (TPM v1.2 Specification Changes, A summary of changes
with respect to the v1.1b TPM Specification, October 2003, Trusted Computing
Group, 14 pages, hereinafter referred to as Changes).

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### 22. As per claim 1

TPM discloses receiving a first set of attestation-signature values (9.3, 31, 31.1, 31.2, 31.3, 31.3.1, 31.3,2)

TPM discloses checking the validity of the first set of attestation-signature values with the public key of the user device (31, 31.1, 31.2, 31.3, 31.3.1, 31.3.2) and Digital Signatures (29.2).

TPM does not explicitly disclose the second set of attestation-signature values being generated by the user device using second attestation values obtained from the privacy certification authority computer however TPM teaches receiving attestation values (4, 9.1, 9.3, 9.4, 31, 31.1, 31.2, 31.3, 31.3.1, 31.3,2, specifically 4, 9.1, 9.4, 31.2 and 31.3.3), Digital Signatures (29.2) and Changes teaches the use of these by verifiers (page 3, Motivation for V1.2, page 5, Variable Anonymity, Page 6, Trust Considerations and page 7, Named Base Solution) therefore a predictable result (*KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007)) of TPM would have been to use a second set of attestation values generated by the user device for the purpose of establishing a system of trust with third parties.

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TPM does not explicitly disclose checking the validity of the second set of attestation-signature values with the public key of the privacy certification authority computer however TPM teaches checking validity with the public key (9.3, 31, 31.1, 31.2, 31.3, 31.3.1, 31.3,2, specifically 4,9.1, 9.4 and 31.1), Digital Signatures (29.2) and Changes teaches the use of these by verifiers (page 3, Motivation for V1.2, page 4-5, DAA Overview and page 7, Named Base Solution), therefore a predictable result (*KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007)) of TPM would have been to use the public key of the privacy certification authority for the purpose of establishing a system of trust with third parties.

and TPM does not explicitly disclose verifying whether or not the first and second sets of attestation-signature values relate to the user device. TPM teaches verifying whether or not the first and second sets of attestation values relate to the user device (4, 9.1, 9.3, 9.4, 31, 31.1, 31.2, 31.3, 31.3.1, 31.3,2), Digital Signatures (29.2), see also Changes (page 3, Motivation for V1.2, 4-5, DAA Overview, therefore a predictable result (KSR International Co. v. Teleflex Inc., 82 USPQ2d 1385 (U.S. 2007)) of TPM would have been to verify that the attestation values came from the user device for the purpose of establishing a system of trust with third parties.

"wherein the privacy certification authority computer uses a same base value for a sufficiently long period of time such that the privacy certification authority computer can determine a frequency with which the security module has requested certification, thereby allowing the privacy certification authority computer to identify whether the security module is a roque security module" is simply descriptive material and as the

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claimed data has no manipulative effect on any of the method steps it is nonfunctional in nature and therefore is not entitled to any patentable weight "Where the printed matter is not functionally related to the substrate, the printed matter will not distinguish the invention from the prior art in terms of patentability .... [T]he critical question is whether there exists any new and unobvious functional relationship between the printed matter and the substrate" *In re Gulack*, 217 USPQ 401 (Fed. Cir. 1983), *In re Ngai*, 70 USPQ2d (Fed. Cir. 2004), *In re Lowry*, 32 USPQ2d 1031 (Fed. Cir. 1994); MPEP 2106.01 II, for more recent treatment of non-functional descriptive material and the impact on patentability see *Ex parte Halligan*, 89 USPQ2d 1355 (Bd. Pat. App. & Int. 2008).

23. As per claim 2 the method according to claim 1, wherein the step of verifying comprises the step of:

TPM does not explicitly disclose verifying that a first value is obtained from a base value, included in the first set of attestation-signature values, and identical to a second value that is derived from said base value and is included in the second set of attestation-signature values 1, however TPM teaches endorsement keys to verify a first set of values (3), a second set of keys to verify a second set of values (4), a base value, (31.3.2, 31.3.3), Digital Signatures (29.2), (see also Changes (page 3, Motivation for V1.2, 4-5, DAA Overview, Variable Anonymity and 6, Name Based Solution, therefore a predictable result (*KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007)) of TPM would have been to use a second set of attestation values for the purpose of establishing a system of trust with third parties.

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As per claim 4 the method according to claim 2, TPM does not explicitly disclose 24. wherein the base value is different each time the method is applied, however this is non-functional descriptive material "Where the printed matter is not functionally related to the substrate, the printed matter will not distinguish the invention from the prior art in terms of patentability .... [The critical question is whether there exists any new and unobvious functional relationship between the printed matter and the substrate" In re-Gulack, 217 USPQ 401 (Fed. Cir. 1983), In re Ngai, 70 USPQ2d (Fed. Cir. 2004), In re Lowry, 32 USPQ2d 1031 (Fed. Cir. 1994); MPEP 2106.01 II. However, TPM teaches endorsement keys to verify a first set of values (3), a second set of keys to verify a second set of values (4), a base value, (31.3.2, 31.3.3), Digital Signatures (29.2), and verifying (31.1, 31.2) (see also Changes (page 3, Motivation for V1.2, 4-5, DAA Overview, Variable Anonymity and 6, Name Based Solution). Therefore a predictable result (KSR International Co. v. Teleflex Inc., 82 USPQ2d 1385 (U.S. 2007)) of TPM would have to change the base value for the purpose of preventing intruder attacks. 25. As per claim 5 the method according to claim 1, TPM does not explicitly disclose wherein the common value is derived from an endorsement key that is related to the security module, however this is non-functional descriptive material "Where the printed matter is not functionally related to the substrate, the printed matter will not distinguish the invention from the prior art in terms of patentability .... [T]he critical question is

whether there exists any new and unobvious functional relationship between the printed

matter and the substrate" In re Gulack, 217 USPQ 401 (Fed. Cir. 1983), In re Ngai, 70

USPQ2d (Fed. Cir. 2004), In re Lowry, 32 USPQ2d 1031 (Fed. Cir. 1994); MPEP

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2106.01 II. However TPM teaches all the base values that form the key (31.3.2, 31.3.3) TPM teaches all the functions that can be used to derive a key (2.2.2, 2.2.2.1, 2.2.2.2, 2.2.3, 2.2.3., 2.2.3.2, 2.2.4, 2.2.5, 2.2.6, 3, 4), see also Changes (page 6, Named-Based Solution), therefore a predictable result (*KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (U.S. 2007)) of TPM would have been to derive an endorsement key that is related to the security module for the purpose of establishing an environment of trust.

# 26. As per claim 21

"wherein the common value is not forwarded to the security module in the user device" is simply descriptive material and as the claimed data has no manipulative effect on any of the method steps it is nonfunctional in nature and therefore is not entitled to any patentable weight "Where the printed matter is not functionally related to the substrate, the printed matter will not distinguish the invention from the prior art in terms of patentability .... [T]he critical question is whether there exists any new and unobvious functional relationship between the printed matter and the substrate" *In re Gulack*, 217 USPQ 401 (Fed. Cir. 1983), *In re Ngai*, 70 USPQ2d (Fed. Cir. 2004), *In re Lowry*, 32 USPQ2d 1031 (Fed. Cir. 1994); MPEP 2106.01 II, for more recent treatment of non-functional descriptive material and the impact on patentability see *Ex parte Halligan*, 89 USPQ2d 1355 (Bd. Pat. App. & Int. 2008).

### 27. As per claim 22

"wherein the privacy certification authority computer does not learn any useful information about the common value" is simply descriptive material and as the claimed

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data has no manipulative effect on any of the method steps it is nonfunctional in nature and therefore is not entitled to any patentable weight "Where the printed matter is not functionally related to the substrate, the printed matter will not distinguish the invention from the prior art in terms of patentability .... [T]he critical question is whether there exists any new and unobvious functional relationship between the printed matter and the substrate" *In re Gulack*, 217 USPQ 401 (Fed. Cir. 1983), *In re Ngai*, 70 USPQ2d (Fed. Cir. 2004), *In re Lowry*, 32 USPQ2d 1031 (Fed. Cir. 1994); MPEP 2106.01 II, for more recent treatment of non-functional descriptive material and the impact on patentability see *Ex parte Halligan*, 89 USPQ2d 1355 (Bd. Pat. App. & Int. 2008).

### 28. As per claim 23

"wherein the user device can use the second set of values only once and only with a given verifier" is simply descriptive material and as the claimed data has no manipulative effect on any of the method steps it is nonfunctional in nature and therefore is not entitled to any patentable weight "Where the printed matter is not functionally related to the substrate, the printed matter will not distinguish the invention from the prior art in terms of patentability .... [T]he critical question is whether there exists any new and unobvious functional relationship between the printed matter and the substrate" *In re Gulack*, 217 USPQ 401 (Fed. Cir. 1983), *In re Ngai*, 70 USPQ2d (Fed. Cir. 2004), *In re Lowry*, 32 USPQ2d 1031 (Fed. Cir. 1994); MPEP 2106.01 II, for more recent treatment of non-functional descriptive material and the impact on patentability see *Ex parte Halligan*, 89 USPQ2d 1355 (Bd. Pat. App. & Int. 2008).

#### 29. As per claim 24

TPM discloses a computer program product tangibly embodying computer readable instructions which when executed causes the computer to implement the steps of the improved method of claim 1 (2.2, 2.2.8, 2.2.10, 26).

### Please note:

A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Applicant(s) are reminded that optional or conditional elements do not narrow the claims because they can always be omitted. See *e.g.* MPEP §2106 II C: "Language that suggest or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. [Emphasis in original.]"; and *In re Johnston*, 435 F.3d 1381, 77 USPQ2d 1788, 1790 (Fed. Cir. 2006) ("As a matter of linguistic precision, optional elements do not narrow the claim because they can always be omitted.").

### Conclusion

30. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES D. NIGH whose telephone number is (571)270-5486. The examiner can normally be reached on Monday-Thursday 6:45-5:15.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Calvin L. Hewitt II can be reached on 571-272-6709. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/JAMES D NIGH/ Examiner, Art Unit 3685

/Calvin L Hewitt II/ Supervisory Patent Examiner, Art Unit 3685